DENSITY, DEMOGRAPHY, AND MICROHABITAT OF CAMPELOMA DECAMPI (GASTROPODA: VIVIPARIDAE)

Thomas M. Haggerty

Department of Biology, University of North Alabama
Florence, AL 35632 U.S.A.
email: tmhaggerty@una.edu

Jeffrey T. Garner

Division of Wildlife and Freshwater Fisheries
Alabama Department of Conservation and Natural Resources
350 County Road 275, Florence, AL 35633 U.S.A.
email: bleufer@aol.com

Lucas Gilbert

Department of Biology, University of North Alabama
Florence, AL 35632 U.S.A.

ABSTRACT

Campeloma decampi, the Slender Campeloma, is a federally endangered snail endemic to the Tennessee River drainage in Alabama, U.S.A. We studied a population in Round Island Creek, Limestone County, in July, 2010, to obtain information about density, microhabitat, and demography. The overall mean density at the site was 49.2/m^2 (± 14.4 SE), but the distribution was highly clumped. We used generalized linear models and multi-model inference to examine the response of snail density to seven microhabitat explanatory variables. The greatest densities were associated with shallow, low-flow areas with silt and clay near the stream margin. Shell heights ranged from 4.3–34.7 mm, and the size distribution appeared to be composed of three cohorts possibly representing age 0+ recruits, age 1+ individuals, and individuals ≥2 years of age. The population was dominated by small individuals (4-12 mm; modal size class = 6 mm), and individuals >20 mm made up only 7% of the population. This size distribution suggests that parturition occurs over a protracted period from late winter to summer and that most individuals produce only one or two broods in their lifetime; however, additional sampling and information about life span are needed to more conclusively describe the reproductive strategy.

KEY WORDS *Campeloma decampi*, Freshwater Gastropod, Endangered Species, Microhabitat, Density, Demography, Slender Campeloma